Figures

Figure 1.1 Map of study area.

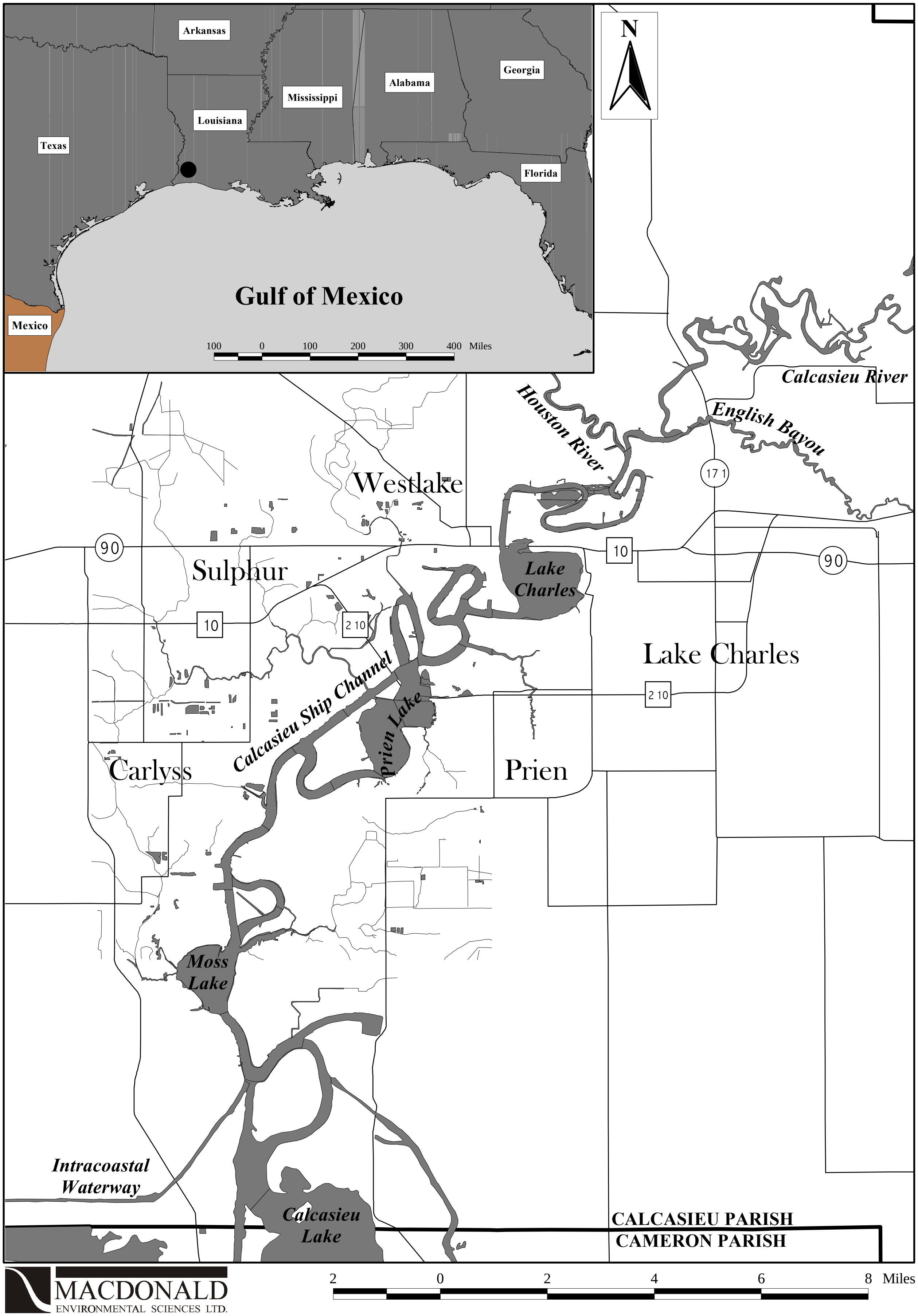

Figure 2.1 Map of the upper Calcasieu River and associated water courses.

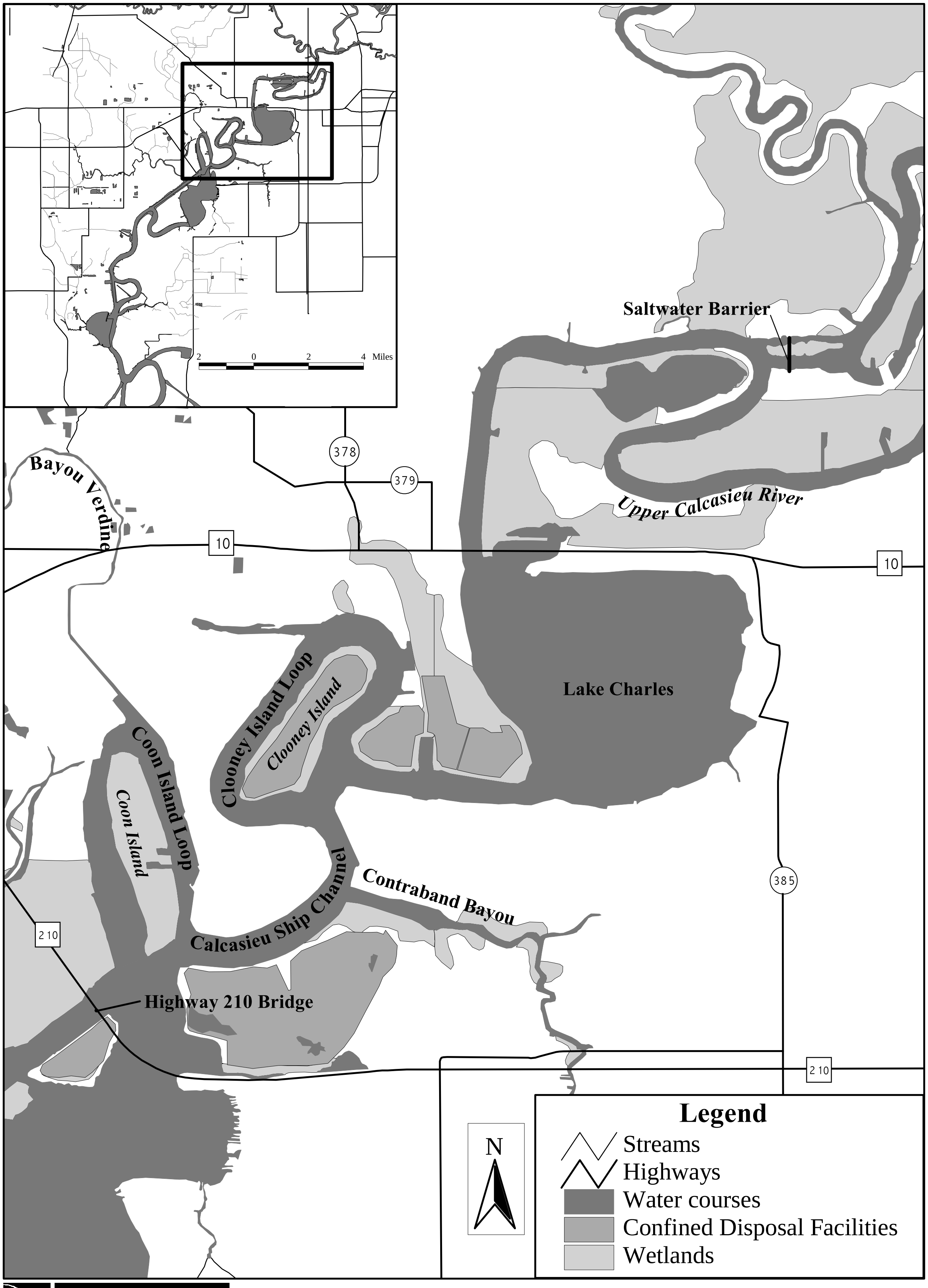

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Figure 2.2 Map of Bayou d'Inde and associated wetland areas.

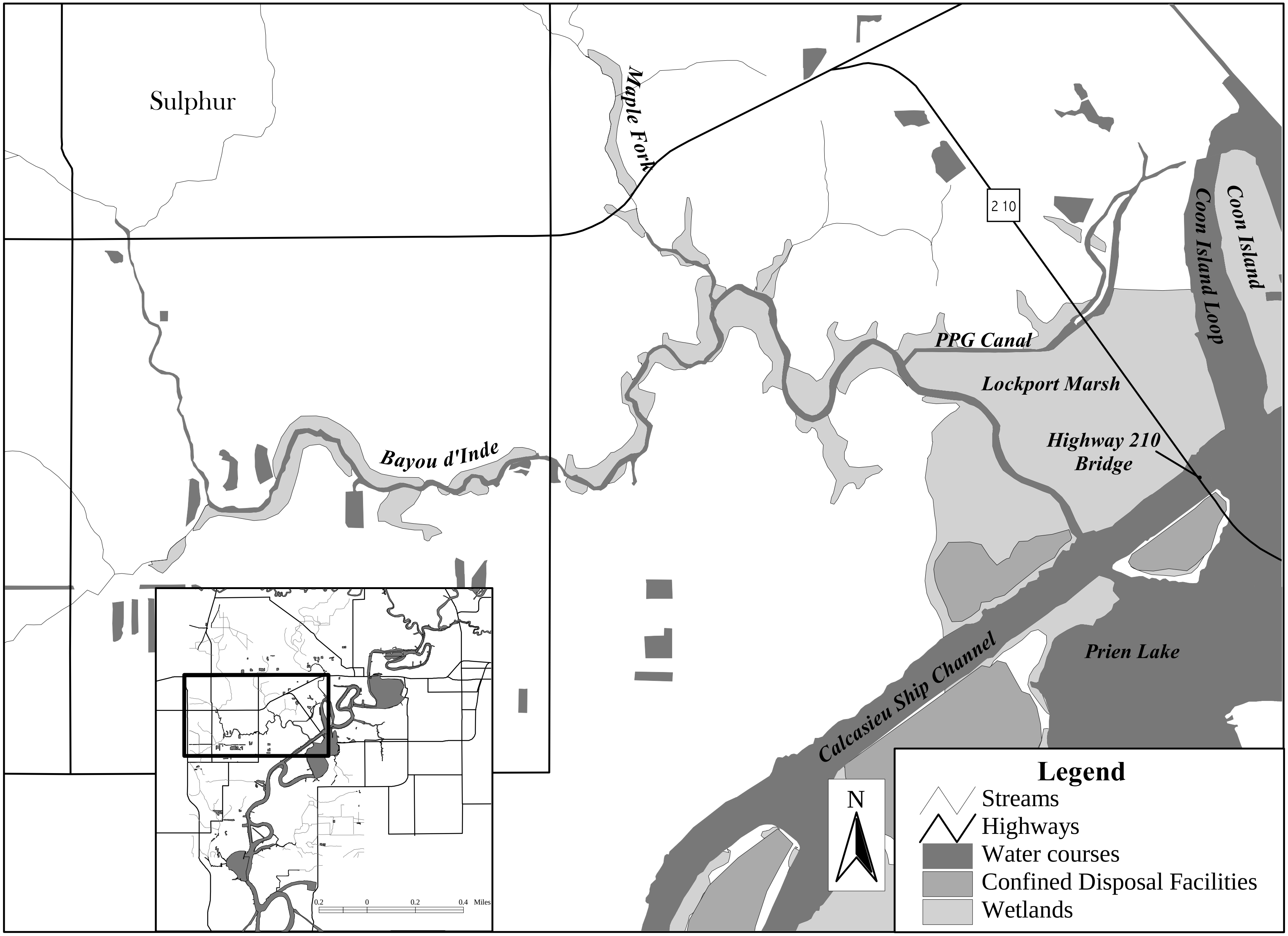

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Figure 2.3 Map of the middle Calcasieu River and associated water courses.

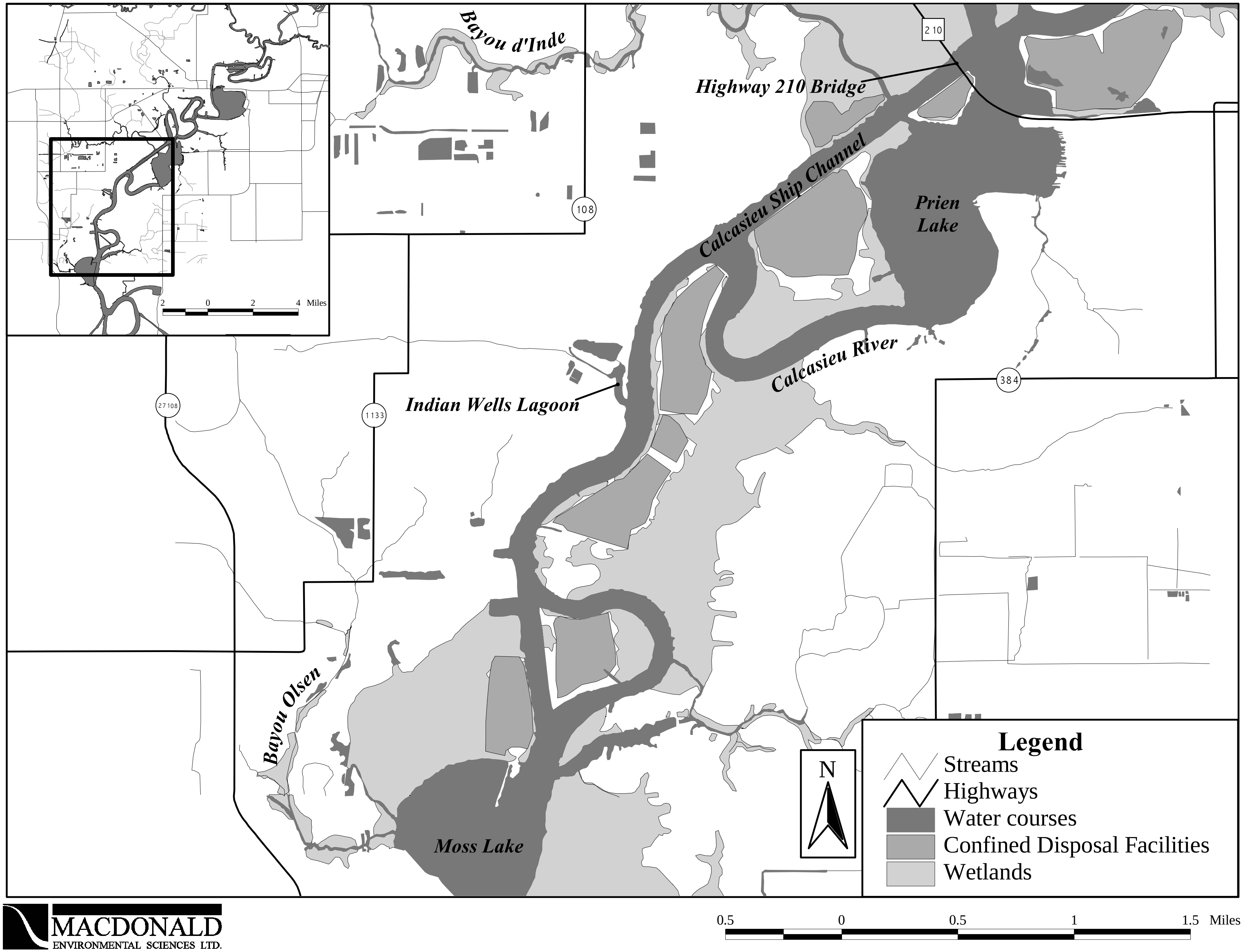

Figure 2.4 Map of the lower Calcasieu Estuary, including the areas selected to represent reference conditions.

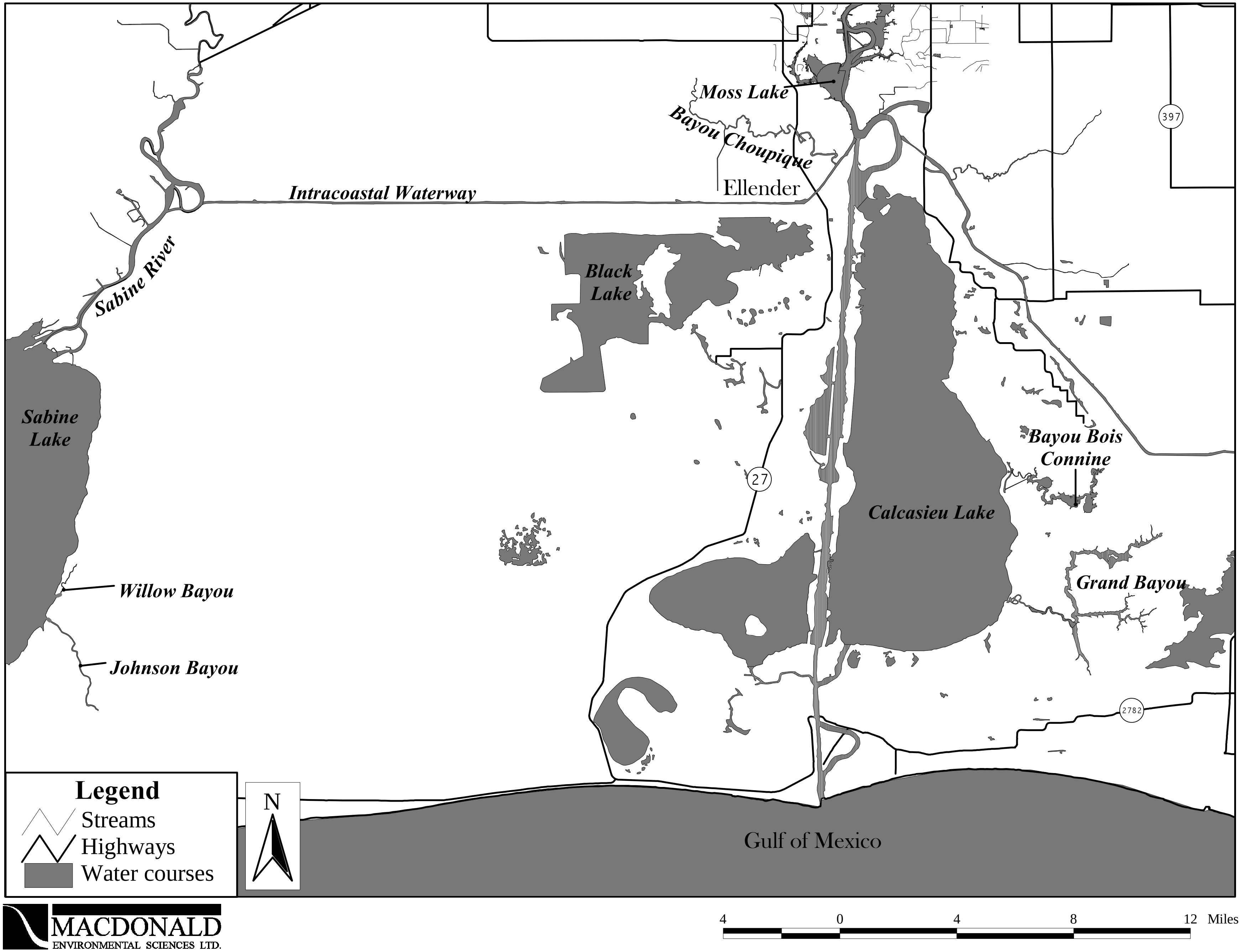

Figure 3.1 Map of study area showing major discharging facilities (USEPA 2000a).

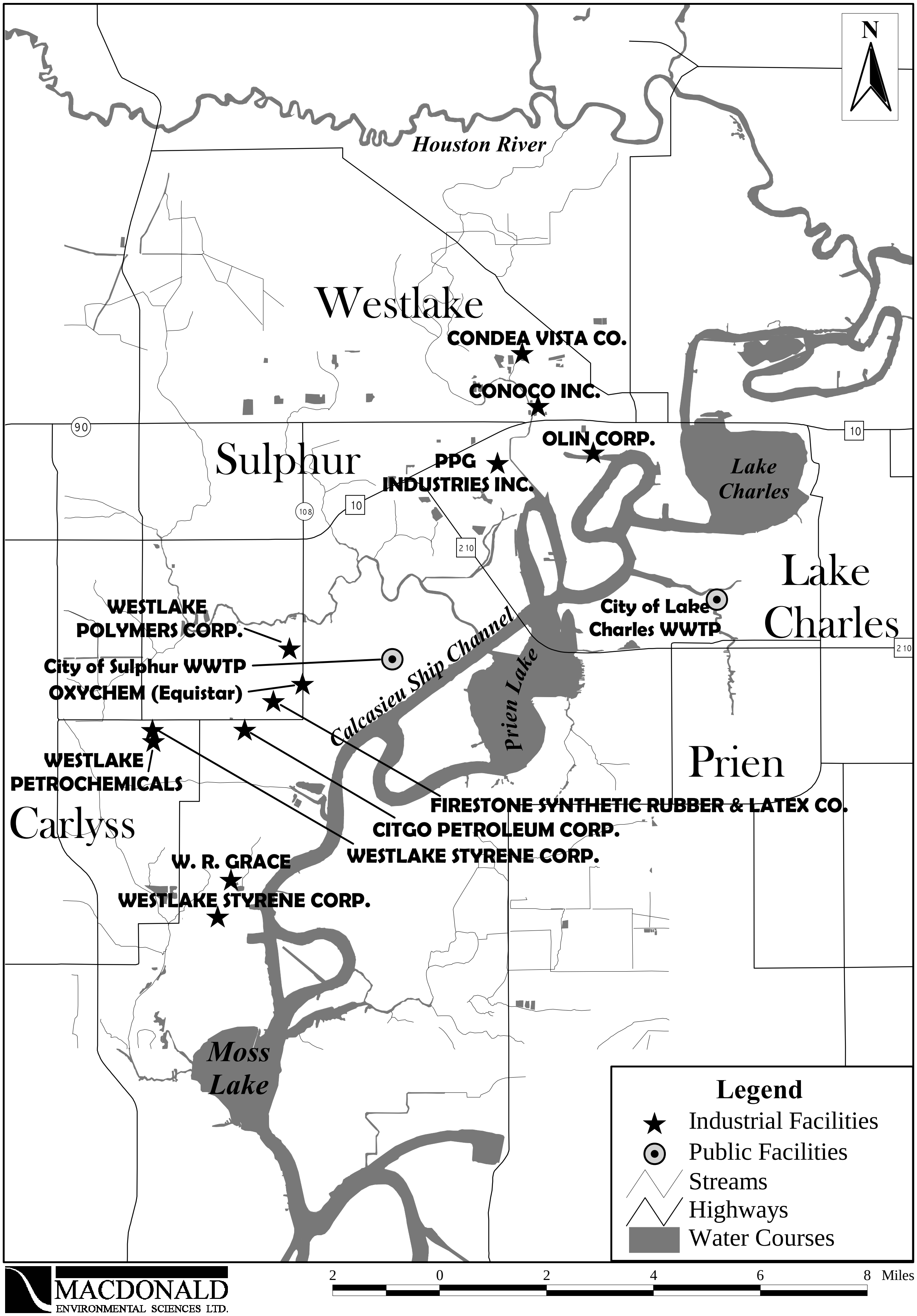

Figure 3.2. Map showing the contaminants of potential concern identified for each reach within the Calcasieu Estuary area of interest.

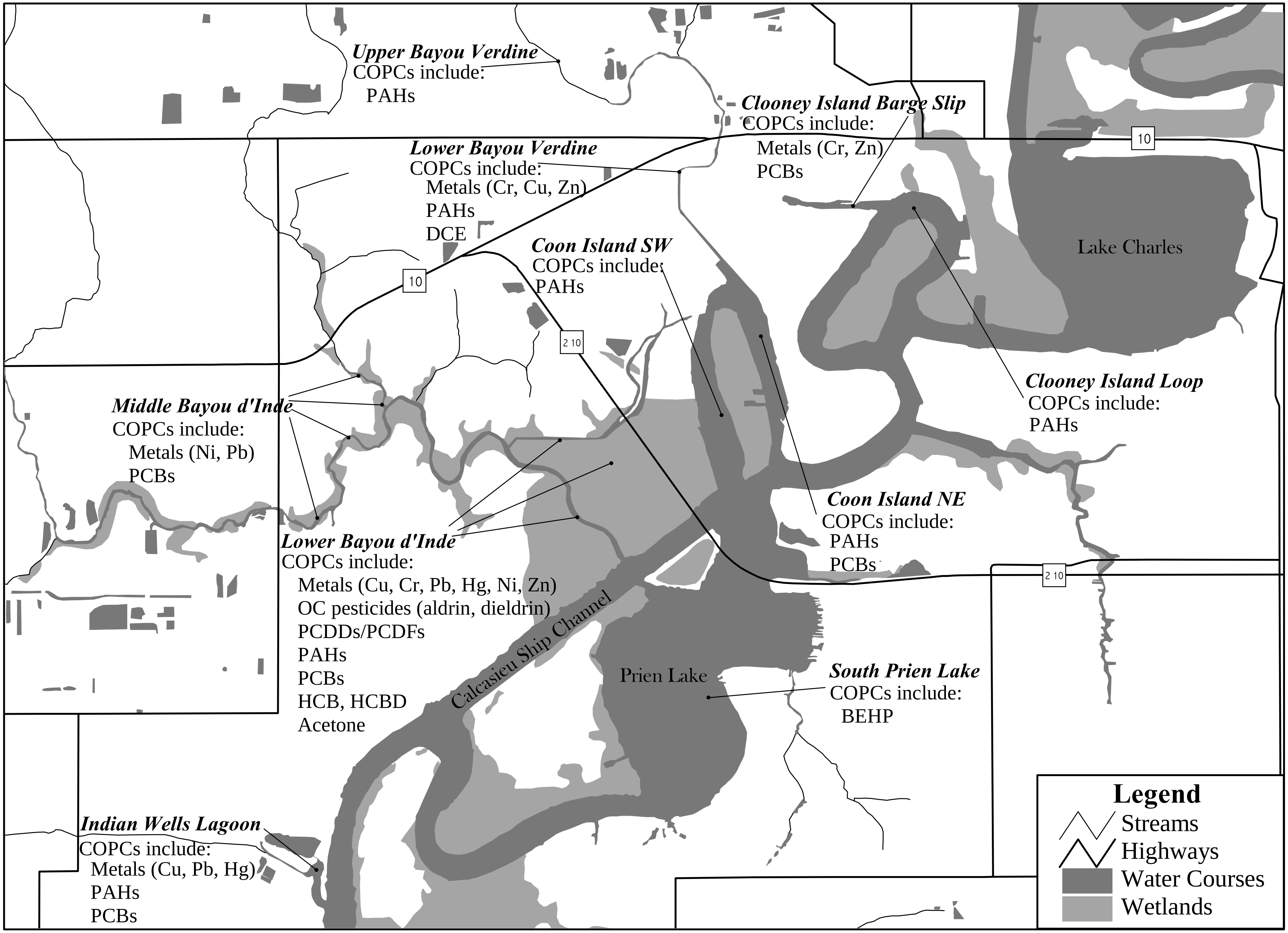

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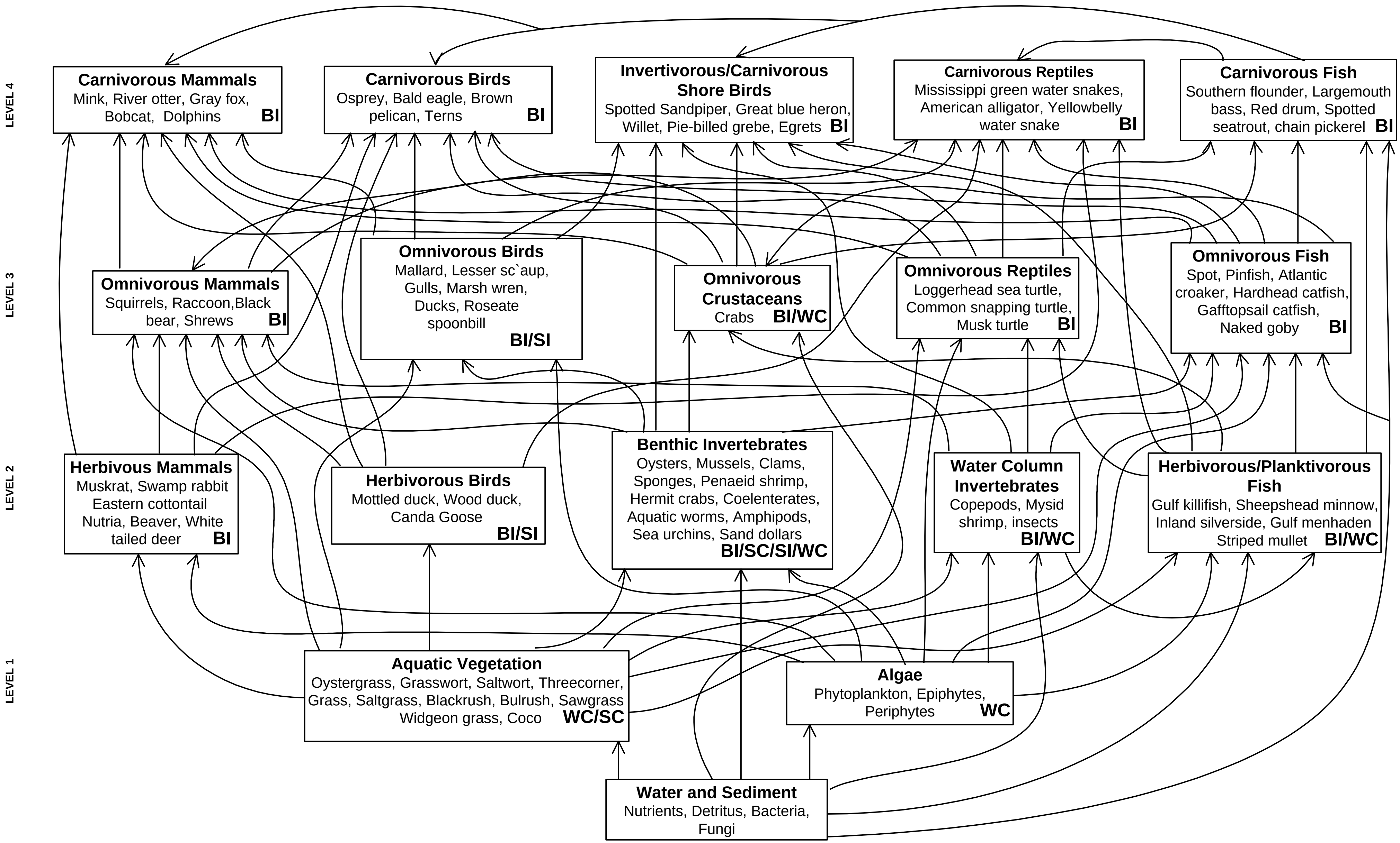
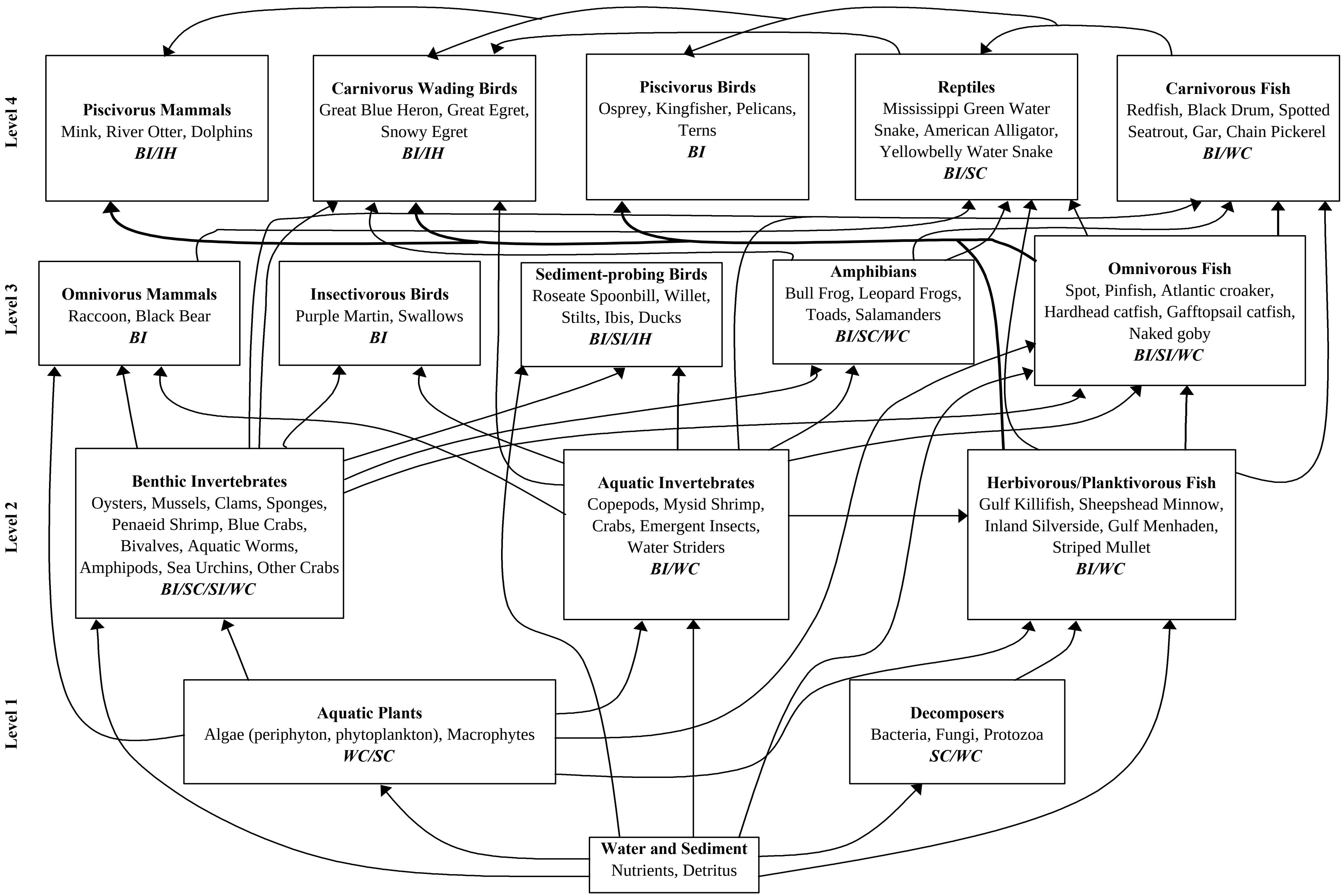
Figure 7.1 An example Gulf Coast estuarine food web (adapted from TNRCC 2000).



Principal Exposure Routes: BI = Biota Ingestion; WC = Water Contact; WI = Water Ingestion; SC = Sediment Contact; SI = Sediment Ingestion

* Insectivorous mammals (bats, nine-banded armadillo) and insectivorous/carnivorous amphibians (toads, frogs, salamanders) are components of the Calcasieu Estuary foodweb that do not appear in this diagram. These groups represent relatively minor components of the overall foodweb and were excluded for the purpose of simplifying the diagram.

Figure 7.2 The Calcasieu Estuary food web showing the principal routes of exposure to contaminated water, sediment and biota.



Principal Exposure Routes: BI = Biota Ingestion; WC = Water Contact; SC = Sediment Contact; SI = Sediment Ingestion; IH = Inhalation
(Note: surface waters tend to have high salinity, reducing the potential for water ingestion by ecological receptors).

Figure 7.3. Conceptual model diagram illustrating exposure pathways and potential effects for bioaccumulative substances.

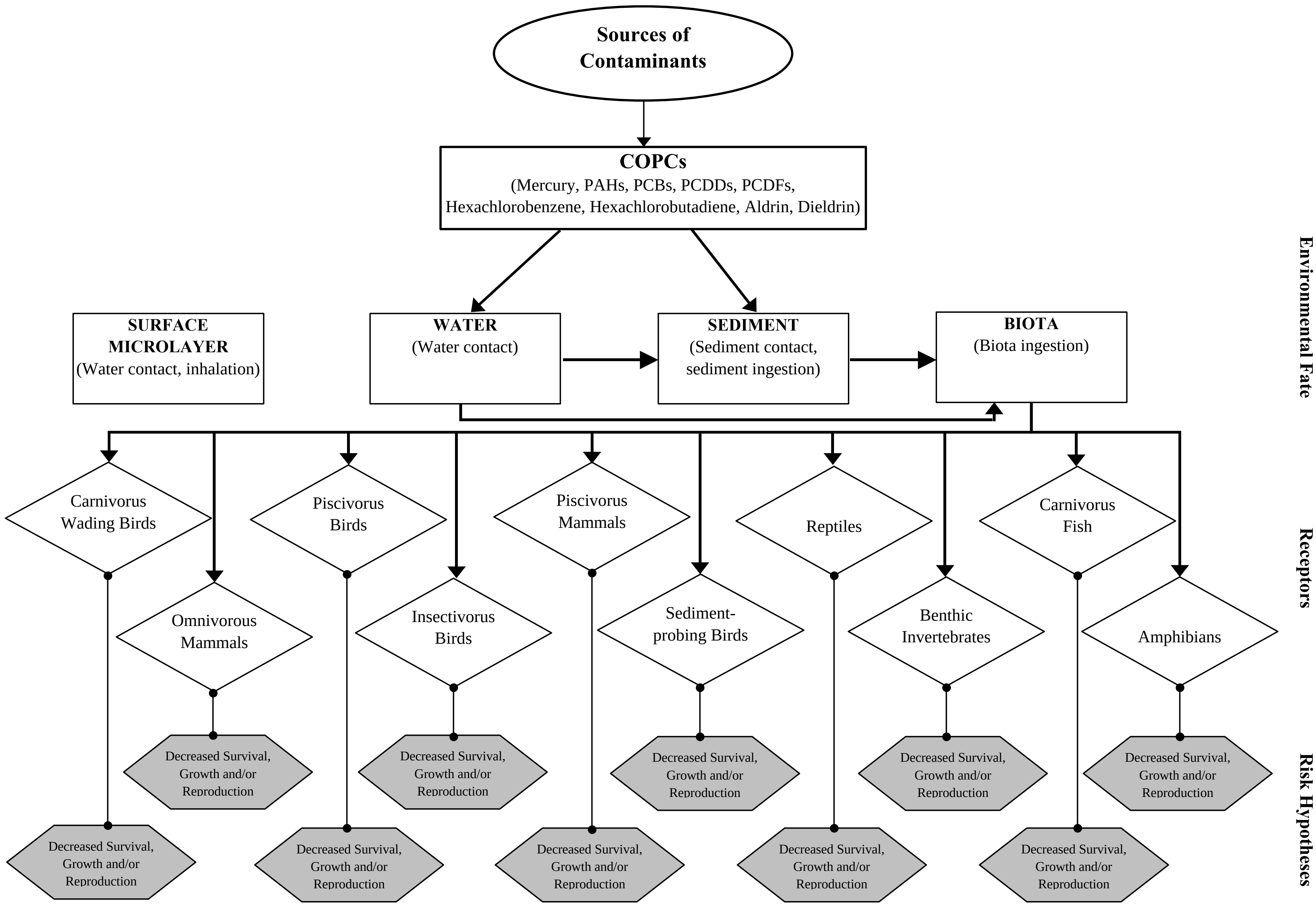


Figure 7.4 Conceptual model diagram illustrating exposure pathways and potential effects for toxic substances that partition into sediments.

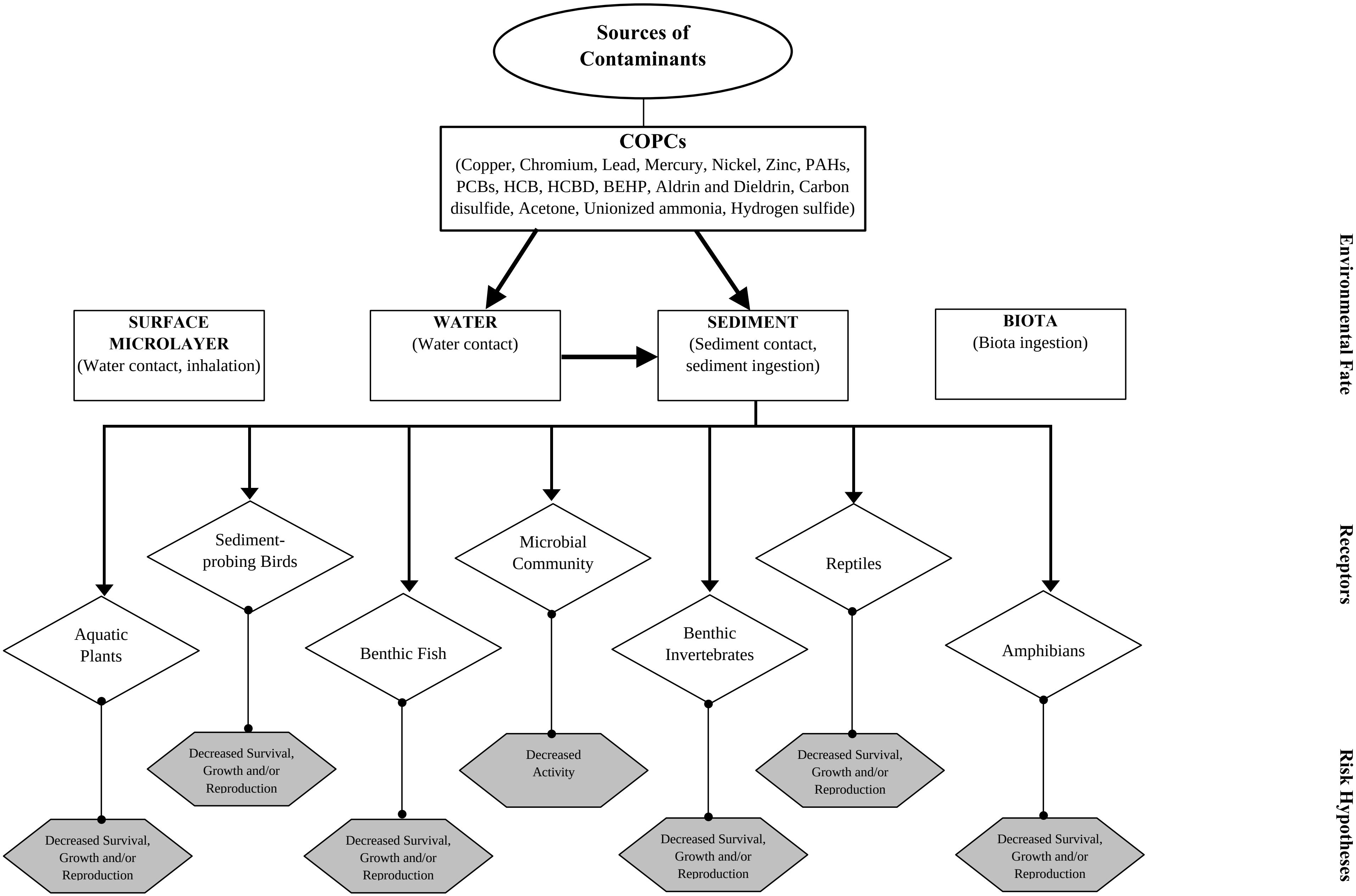


Figure 7.5 Conceptual model diagram illustrating exposure pathways and potential effects for toxic substances that partition into overlying water.

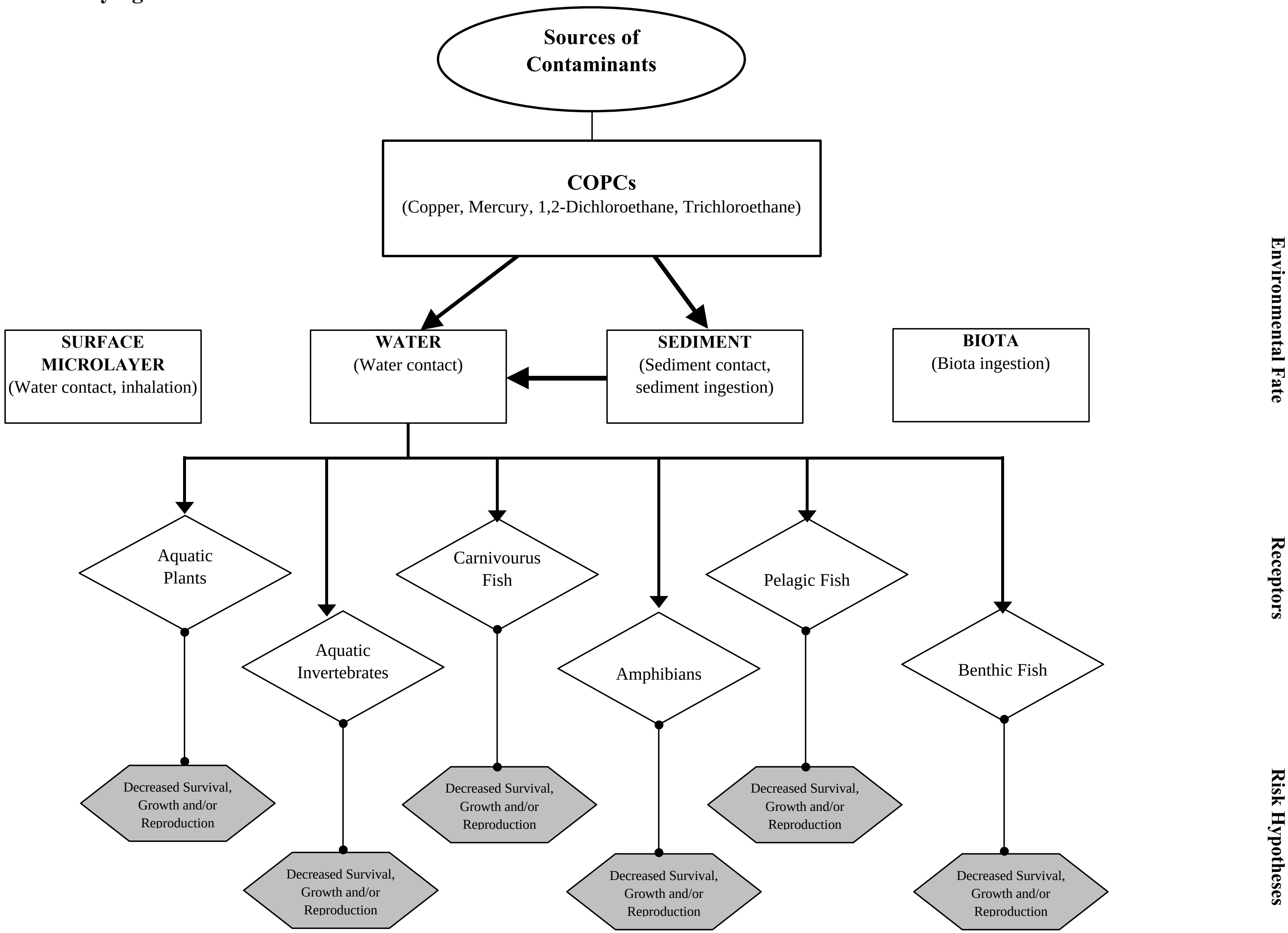


Figure 7.6 Conceptual model diagram illustrating exposure pathways and potential effects for toxic substances that partition into the surface microlayer.

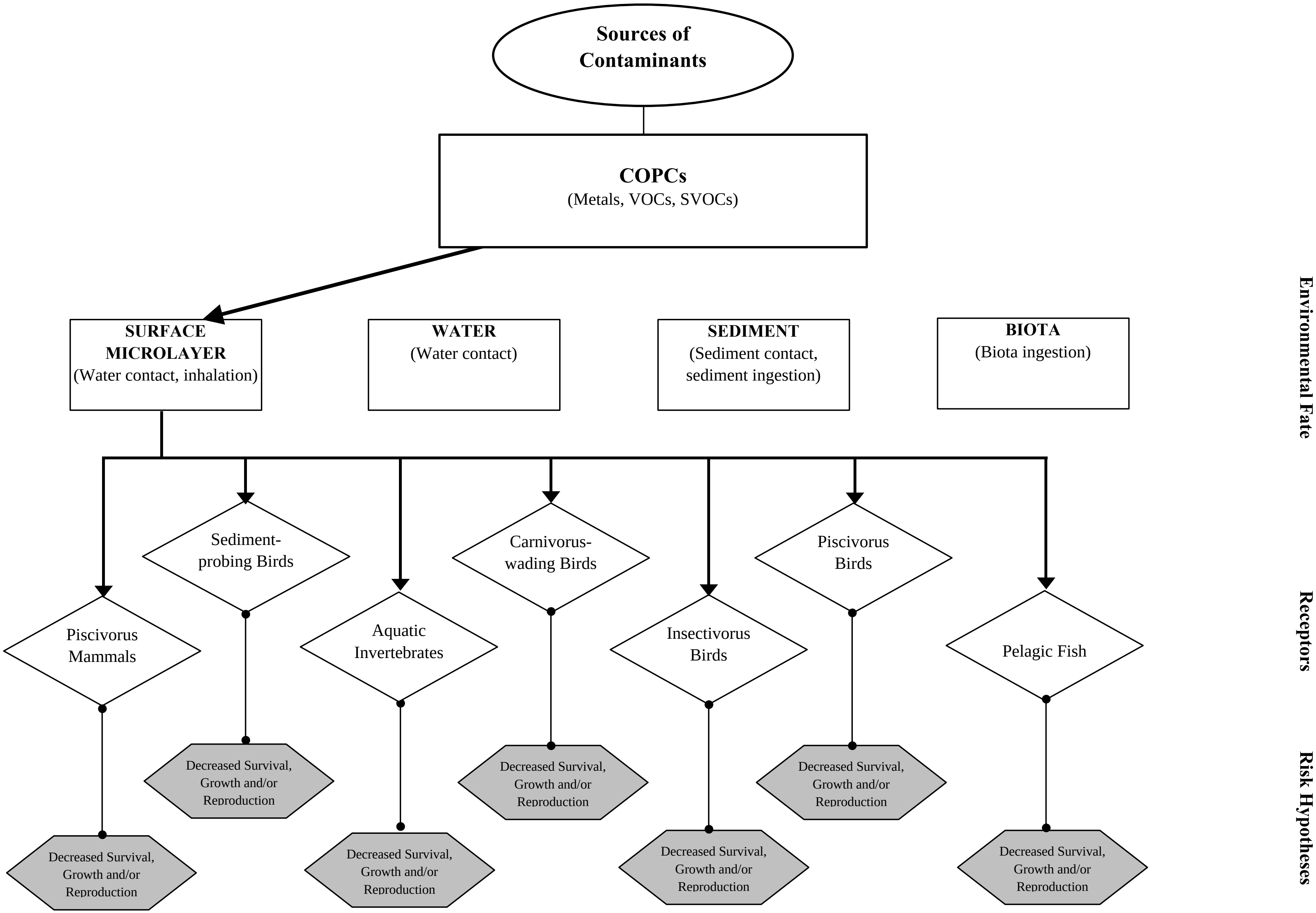


Figure 7.7 Conceptual model diagram illustrating exposure pathways and potential effects for all categories of COPCs.

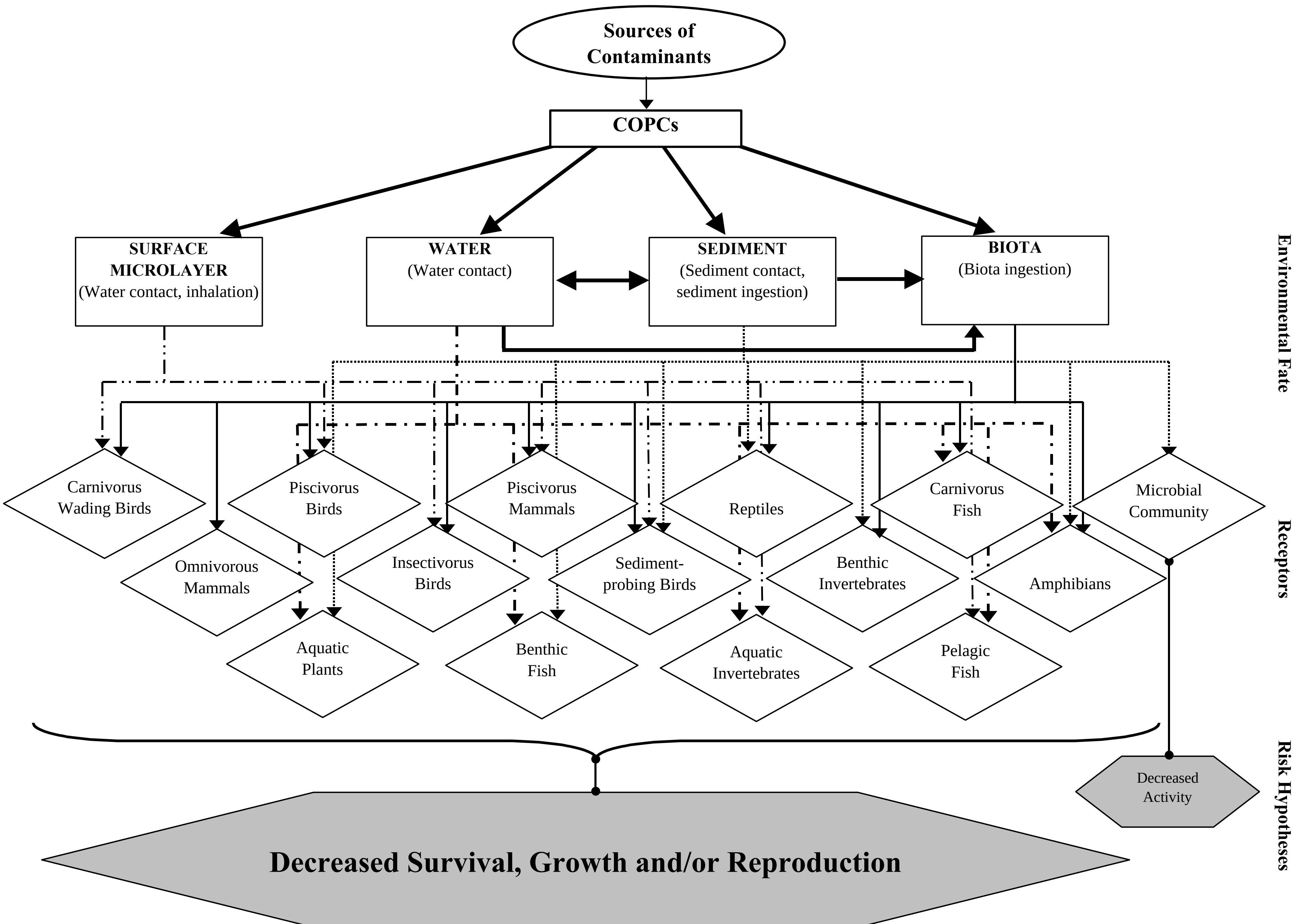


Figure 9.1. General mechanics of a probabilistic risk analysis. Following selection of the measure of risk and the equation that will estimate risk, probability density functions (PDFs) are specified for each input variable. The input PDFs are combined as specified in the risk equation and the output generated by means of a Monte Carlo simulation or other method. The resulting risk estimate is then carefully examined (e.g., by means of a sensitivity analysis) and the analysis fine tuned by adjusting the input PDFs or risk equation as necessary. Upon completion of the analysis, the results are summarized, generally in the form of a probability density function (as in figure) or a cumulative probability distribution.

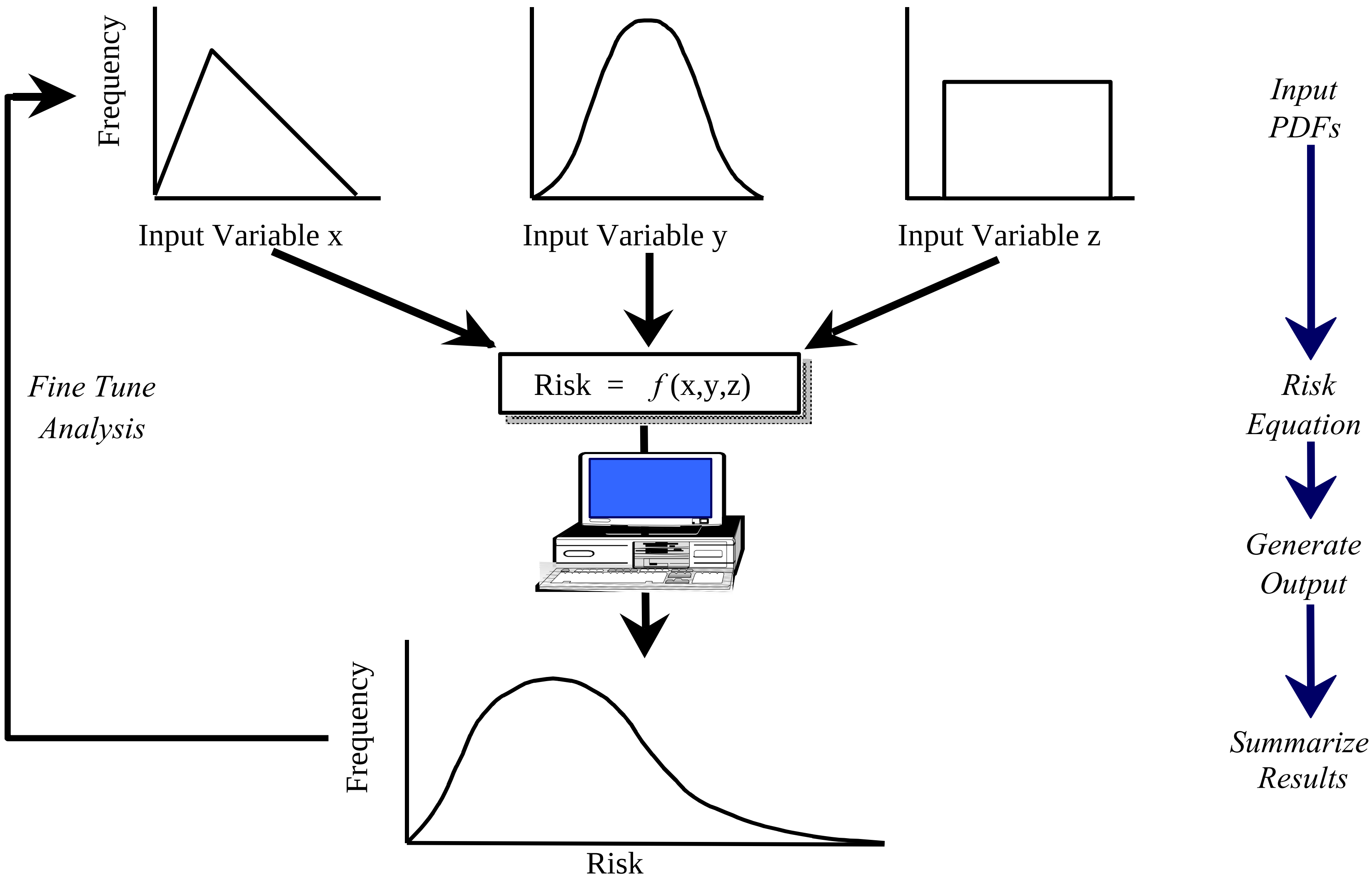


Figure 9.2. Use of 2nd order Monte Carlo approach to distinguish between variability and incertitude for mathematical expressions involving constants and random variables. Five hypothetical values or distributions from the outer loop simulation are shown for the inputs and output. For the well characterized input constants and random variables, the values and distributions, respectively, do not change from one outer loop simulation to the next.

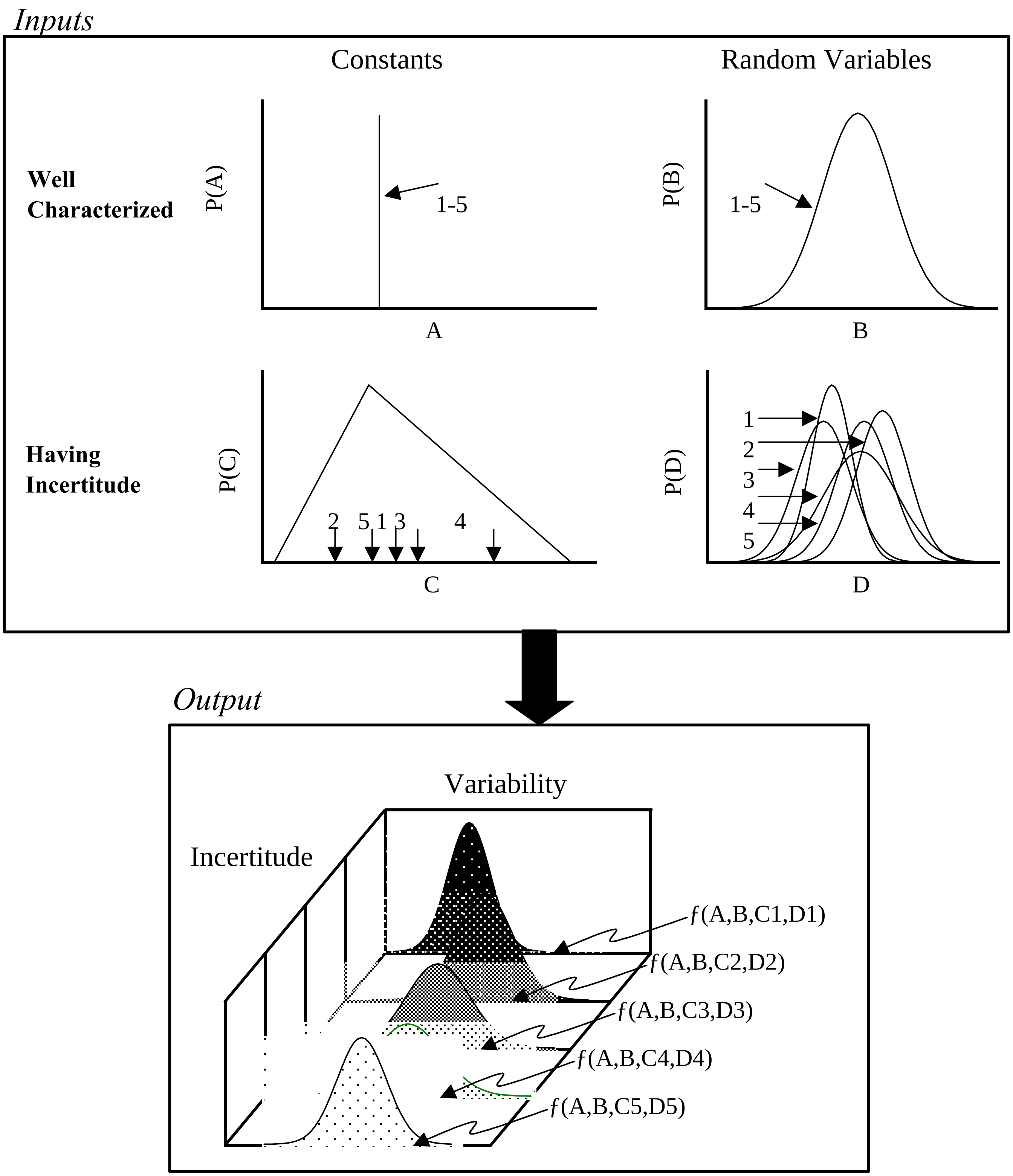


Figure 9.3. An example showing how exposure and effects distributions are combined to generate a risk curve (see Moore *et al.* 1999b for more detail). (A) Cumulative density function for female mink exposed to methylmercury near East Fork Poplar Creek, Tennessee. (B) Concentration-response curve with 95% fiducial limits for effects of dietary methylmercury on survival of female mink during chronic exposures (circles indicate original data). (C) Estimated dose-response curve. (D) Risk curve for female mink exposed to methylmercury.